

## **IN THE CLAIMS**

This listing of claims replaces all prior versions, and listings, in this application.

Claims 1-3 (canceled)

4. (currently amended) A process as claimed in claim 25 [[2]] wherein the solid matrix is siliceous or is aluminated (containing aluminium in the matrix framework).

5. (currently amended) A process as claimed in claim 25 [[2]] wherein the blocking agent is selected from the group consisting of a dialkyl and a diaryl substituted dihalosilane having the general formula of  $R_2SiX_2$ , wherein R is an alkyl, aryl, or arylalkyl group and X is a halogen atom selected from the group consisting of Cl, Br, and I.

6. (currently amended) A process as claimed in claim 25 [[2]] wherein a solvent system used for the treatment of the matrix to block the exterior surfaces and subsequent functionalization is selected from the group consisting of dichloromethane, diethylether, dry methanol, dry ethanol, cyclohexane, cyclopentane, hexane, pentane and octane.

Claim 7 (canceled)

8. (currently amended) A process as claimed in claim 25 [[2]] wherein in the transition metal complex of Formula II, N-O is selected from the group consisting of 8-hydroxyquinoline, 2-hydroxypyridine, 2-(2-hydroxyethyl) pyridyl-2-carboxylate, piperidyl-2-carboxylate, quinoly-2-carboxylate, isoquinoly-1-carboxylate, and isoquinoly-3-carboxylate.

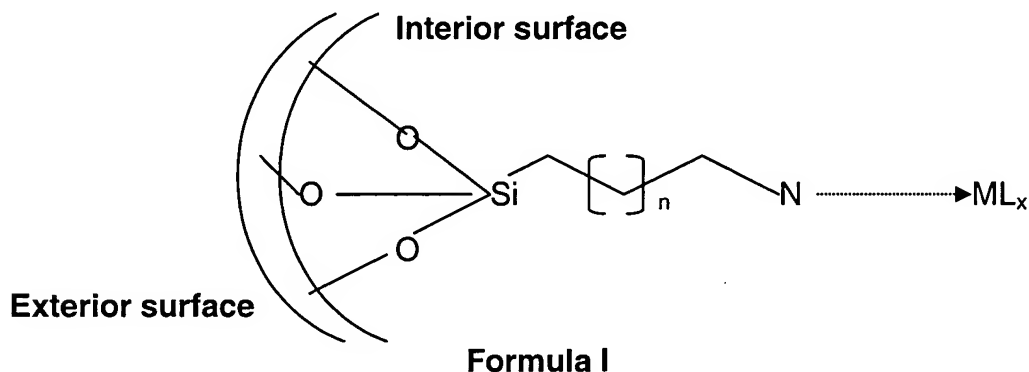
9. (currently amended) A process as claimed in claim 8 wherein N-O the semilabile anionic chelating ligand is pyridyl-2-carboxylate.

10. (currently amended) A process as claimed in claim 25 [[2]] wherein in Formula II, M is Pd; R<sub>1</sub>, R<sub>2</sub>, and R<sub>3</sub> are phenyl; X is *p*-toluenesulphonato, N-O is pyridyl-2-carboxylate and m is 3.

11. (currently amended) A process as claimed in claim 25 [[2]] wherein the anchoring of the metal complexes of Formula II is done in a solvent selected from the group consisting of methanol, ethanol, propanol, acetone and 2-butanone.

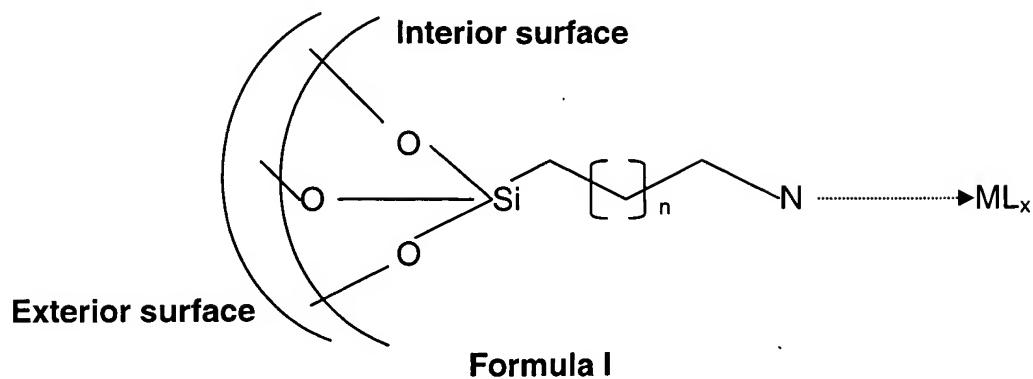
Claims 12-23 (canceled)

24. (new) An immobilized metal complex catalyst of the Formula I

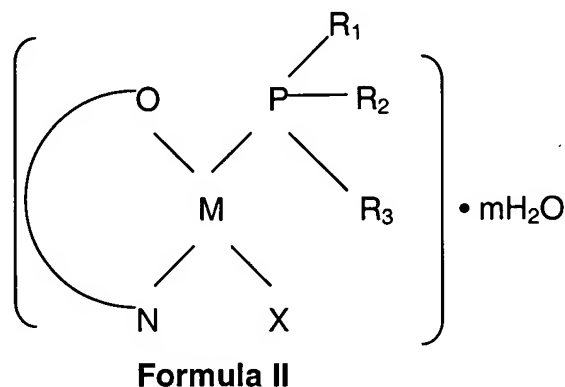


wherein M is a Group VIII metal, n is an integer in the range from 2 to 6, ML<sub>x</sub> is an organometallic complex, L<sub>x</sub> is a phosphine ligand, and x is an integer in the range from 1 to 4; wherein the complex is anchored to the interior of a solid matrix with exterior surface and interior surface, and the solid matrix comprises a microporous material selected from the group consisting of Zeolite Y, Zeolite B, and ZSM-5 or a mesoporous material selected from the group consisting of MCM-41 and MCM-48.

25. (new) A process for the preparation of an immobilized metal complex catalyst of Formula I



wherein M is a Group VIII metal, n is an integer in the range from 2 to 6,  $ML_x$  is an organometallic complex,  $L_x$  is a phosphine ligand, and x is an integer in the range from 1 to 4; wherein the complex is anchored to the interior of a solid matrix comprising a microporous material selected from the group consisting of Zeolite Y, Zeolite B, and ZSM-5 or a mesoporous material selected from the group consisting of MCM-41 and MCM-48; the process comprising pretreating a solid matrix with exterior surface and interior surface, by blocking the exterior surface using a blocking agent in a solvent system leaving the interior surface undisturbed; functionalizing the interior surface of the solid matrix with a functionalized silane having a general formula of  $Z-(CH_2)_p-Si(OR)_qH_{3-q}$ , wherein Z is  $-NH_2$ , p is an integer in the range from 2 to 6, OR is an alkoxy group, and q is an integer in the range from 1 to 3; followed by treating the functionalized matrix with a transition metal complex solution of Formula II



wherein M is a Group VIII metal;  $R_1$ ,  $R_2$ , and  $R_3$  are substituents on the phosphine ligand and are selected from the group consisting of hydrogen, alkyl, aryl, arylalkyl, and arylalkyl cycloaromatic group; X is selected from the group consisting of aryl

sulphonato, alkyl sulphonato, aryl carbonate, alkyl carbonate, and formato, and a halide selected from the group consisting of Cl, Br, and I; N-O is a semilabile anionic chelating ligand containing an N donor and O<sup>-</sup> group;  $1 < m < 10$ ; to immobilize the complex to the interior of the solid matrix, to obtain the immobilized metal complex catalyst.